Project Narrative - Cover Page

Project Title: Allegheny County Targeted Air Shed Grant PM2.5-Reducing Project at Industrial Sources

Applicant Information:
Organization:
Allegheny County Health Department
ACHD is responsible for the development and implementation of the state implementation plan (SIP) to attain and maintain the national ambient air quality standard for PM2.5 within the Allegheny County PM2.5 (2012 Annual Standard) Non-Attainment Area defined in Section I.A. of the RFA. The ACHD is currently receiving a continuing air program grant under Section 105 of the Clean Air Act to carry out those responsibilities. (Grant#A-003041-20).

Address:
542 Fourth Avenue
Pittsburgh, PA 15219
412-578-8005

Contact: Ms. Jayme Graham
Manager, Air Quality Program
Phone: 412-578-8103
Fax: 412-578-8144
Email: Jayme.Graham@AlleghenyCounty.US

DUNS number: 1746691840000

Budget Summary

Project Number	Name	EPA Funding Requested	Voluntary Cost Share, if applicable	Total Project Cost
1	U.S. Steel cleaner diesel, two tugboat replacements	$4,600,000		$4,903,910
2	U.S. Steel Clairton Coke Works baghouse improvements	$5,000,000		$50,000,000 to $100,000,000
3	U. S. Steel electric locomotive	$3,000,000		$3,000,000
4	CSXT Demmler Yard two diesel switcher repowers	$4,400,000		$4,400,000
	Administrative Personnel	$56,388		$56,388
	TOTAL	**$17,056,388**		**$62,360,298 to $112,360,298**

Project Period: October 1, 2020 to September 30, 2025.

Brief Project Description:
Project (1) will replace two tugboats with Tier 1 engines with two tugboats having Tier 3 engines.
Project (2) will reduce emissions from coke oven pushing operations through improved baghouses.
Project (3) will replace a Tier 0 diesel locomotive with a battery powered locomotive.
Project (4) will repower two Tier 0 switcher locomotives to Tier 2 Switch locomotives.

Project Location: The projects are in the City of Clairton and Municipality of East McKeesport, both in Allegheny County, Pennsylvania. McKeesport is directly north of the Liberty/Clairton area. The benefits will be realized most intensely near the highest PM2.5 concentration and in the Greater Mon-Valley area of Allegheny County.

Narrative Proposal Work-Plan

Section 1. Project Summary/Approach

A. Ongoing, Significant Emissions Reductions & Consideration of Other Activities.

The highest concentration of PM2.5 in Allegheny County is the southeast portion of the County. A significant amount of the particulate matter is in the form of primary emissions coming from local sources. The projects proposed in this application will make a sizable impact on the local communities of Liberty, Lincoln, Port Vue and Glassport Boroughs and the City of Clairton. The improvements will also impact air quality across the entire non-attainment area of Allegheny County. All four projects will provide low emissions for a significant lifespan. Each and all improvements will provide relief for many years to come.

The narrative proposal addresses the categories of "Industrial" and "Transportation" found in Section I.B of the RFA.

Project (1) Clairton Tugboat Project

U. S. Steel currently owns and operates three tugboats with low-tier diesel engines used to move coal barges from storage locations along the Monongahela River to locations along the Clairton Plant where coal unloading operations can access the barge and offload the coal. The coal is the main ingredient in the coke-making process. Each tugboat averages approximately 8,000 operating hours per year with an average engine load of 250 brake-horsepower. The project involves replacement of two of the tugboats with UEPA Commercial Marine Tier 1 engines with two tugboats with USEPA Commercial Marine Tier 3 rated engines. Due to the horsepower need of the tugboats, the USEPA Commercial Marine Tier 3 rated engines are the highest rated engines compatible with the tugboat.

Tugboat Project Cost and Leverage

Approximate cost for each tugboat with upgraded marine diesel engines is $2,451,955. Total project grant request equals $4,600,000. U. S. Steel will contribute the remaining amount of the project cost above the TAG.

Tugboat Project Expected Benefits to Public Health and/or Environment and the Community

The annual emissions reductions from this project were calculated on the difference between past actual emissions as compared to future project actual emissions. Both emissions estimates were based on two engines operating with an average brake-horsepower of 250 bhp and approximately operating 8,000 hour per year. The reductions would be continuous and ongoing and are as follows:

NOx + HC reductions of - 16.1 tons per year
PM reductions of 1.4 tons per year
CO reductions of 21.0 tons per year

Area Benefitted from the Project

The Clairton, Lincoln and Liberty areas will benefit most from the project. These communities are not only environmental justice communities, but communities that are regularly subjected to high emissions from the nearby sources. The United States Steel Clairton Works is the largest metallurgical coke plant in the United States, and though it has some of the tightest emission limits, still produces a measurable amount of the primary particulates that impact the high monitor in Liberty Borough. This project and the others will ease that burden.

Tugboat Project Schedule

U. S. Steel can complete the tugboat replacement project in approximately 12-36 months from project approval.

Project (2) United States Steel Clairton Coke Works 13-15/19-20 Battery PEC Project

The U. S. Steel Pushing Emission Control (PEC) Project for 13-15 Battery PEC and 19-20 PEC that will reduce emissions from pushing from 13-15 and 19-20 Batteries. The project will consist of an increase in capture and control of the pushing emissions to reduce PM, PM10, and PM2.5 emissions from the coke-pushing process.

Battery PEC Project Cost and Leverage

The project cost is estimated to be between $50 and $100 Million. The request for TAG money is $5 Million. U. S. Steel will contribute the remaining amount of the project cost above the TAG.

Battery PEC 13-15/19-20 Expected Benefits to Public Health and/or Environment and Community

This project is expected to reduce PM, PM10, and PM2.5 emissions from the pushing process on 13-15/19-20. The amount of reductions has not been quantified in the early stages of the project development process. The reductions would be continuous and ongoing for the life of the plant. The Clairton, Lincoln and Liberty areas will benefit most from the project.

Battery PEC 13-15/19-20 Project Schedule

U. S. Steel will complete the project 28 months after permit approval by ACHD. Permit applications are anticipated to be submitted on or before July 1, 2020.

Project (3) Replacement of Tier 0 Locomotive with Battery Powered Locomotive

Project Concept

United States Steel will repower a diesel locomotive to a SW1200 lithium-ion, battery-electric locomotives. The proposed locomotive will have the following build specifications and support:
Two battery-electric SW1200; Locomotive will be FRA and AAR compliant for revenue service;
Locomotive to have the minimum performance characteristics of a standard EMD SW1200 locomotive.
(Note: the supporting document speaks of 2 locomotives. This application is for one only.)

Project Cost and Leverage

The project is expected to cost approximately $3,000,000. The full cost is requested as part of this grant.

Project Expected Benefits to Public Health and/or Environment and the Community

The locomotive is used in the U.S. Steel Mon Valley Works, and travel between plants. These plants are located in Environmental Justice areas that receive the highest particulate impact in the County, a County that continues to violate the particulate standards.

Project Expected Emission Reductions

The emission will go to zero in a battery-operated engine from the emission level of a Tier 0 engine. One year of PM2.5 is estimated to decrease 1.88 tons. Over a conservative six-year period this results in improvements of 11.3 tons. Other pollutants will also decrease: NOx 85.46 TPY, hydrocarbons 15.21 TPY, and CO 57.94TPY.

Project (4) CSX Locomotive Repower Project

Project Concept

This project will repower two existing diesel-powered switcher locomotives with state-of-the-art engines certified to Tier 2 switch locomotive emission standards.[1] The new locomotives will be used in service as switcher locomotives at the CSXT Demmler Yard facility located in the city of McKeesport, PA as well as in localized service outside the yard. The repowered lower emissions locomotives will replace old locomotives currently used in switch service that are certified to a Tier 0 emission standard. This will significantly reduce emissions of fine particulate, $PM_{2.5}$, from the facility as well as nitrogen oxide (NOx) emissions, a precursor to fine particulate.

The PM2.5 concentrations in Allegheny County are among the highest in the nation and compromise the health and well-being of the Allegheny County residents. It is the desire of all that more be done to reduce PM2.5 in Allegheny County, and this project would be a step in that direction. The repowering of an old Tier 0 diesel engine with an electronically controlled, low emission engine certified to Tier 2 switch at the CSXT Demmler Yard will reduce emissions of fine particulate matter (PM2.5) from the rail yard and result in improvement in air quality in Allegheny County, helping Allegheny County to approach attainment of the National Ambient Air Quality Standard for PM2.5.

Environmental Justice

According to the 2010 census, the population of the City of McKeesport is 19,731, or about 1.6% of the population of Allegheny County, with approximately 34% minority population and 30% of persons are living below the poverty line. It is home to several air-permitted sources of PM2.5 pollution. This project will be focused on a local, community area and a population that is disproportionately affected in adverse ways by pollution issues, rather than a large geographic area.

Cost and Emission Reduction Benefits

The current CY2020 cost estimate for repowering a single locomotive is approximately $2.2 million; this proposal is for $4.4 million for two repowered units. The emission reduction estimates of converting two Tier 0 locomotives to two certified to the Tier 2 switch (SW) standards would be 2.4 tons per year of PM and 24 tons of NOx. Additionally, the effort would also reduce fuel consumption by about 10,000 gallons annually equating to a CO2 reduction of approximately 112 tons per year. These emission reductions would be ongoing and continuous over the life of the locomotives.

Project Expected Benefits to Public Health and/or Environment and the Community

This project is located directly north of the Liberty borough monitor, and emissions reductions from this site will improved conditions not only in the McKeesport area, an environmental justice area, but the entire lower Monongahela Valley.

B. Emissions Inventory & Progress Towards Attainment

A mobile source inventory is not available for the direct Liberty Borough & City of Clairton ("Liberty/Clairton area".) The mobile source inventory for the entire County of Allegheny is 361 tons per year fine particulates for non-road mobile sources. The three mobile source projects in this application total 3.68 tons per year. More notably, these emissions will be decreasing in the immediate area of the long-standing non-attainment issues. These should measurably improve the air quality in the County. Other pollutants and precursors of $PM_{2.5}$ will also decrease.

Total PM2.5 emissions for Allegheny County in the 2011 base year are 2,503 tons per year. Emissions from the U.S. Steel coke plant totaled approximately 643 tons in 2011. The PEC BH improvement project will include reductions in particulate matter emissions as well as improvements to dispersion. The

[1] The horsepower of the locomotive classifies it as a line-haul locomotive; however, it is used in switcher service. Therefore, when repowered, the locomotive will be certified to Tier 3 line-haul and Tier 2 switch emission standards, consistent with the requirements of 40 CFR 1033.

baghouse project will include an approximate 2% increase to capture efficiency through increased flow and negative pressure (draft) at the hood where the pushing emissions are captured. This will have a significant impact on reductions to fugitive emissions from coke oven pushing on Batteries 13, 14, 15, 19 and 20. In addition to the reduction in emissions, the baghouse project design includes removing the lower-height lower flow multiple exhaust point stacks with one stack five meters higher. A taller single stack with increased flow will improve the dispersion of particulate matter, though the actual emission decrease will not be determined until the full design is complete.

C. Innovative Emissions Reductions

The Coke Oven Battery PEC project will utilize the latest capture and control technology available in the industry. A coke oven "bakes" coal with no oxygen for a period. Then front and back doors are opened, and a hood is placed on one side of the battery opening. As the final coke product is pushed out that door, emissions from the extremely hot coke rise and are mostly captured by the hood and sent to a baghouse that pulls the particles out of the air before releasing the air to the atmosphere. The emissions from the battery oven often overwhelm the hood system. This project will increase the airflow to the two hoods, thus minimizing the fugitive releases of emissions. The baghouses will also be improved to better control the emissions. This project is for two baghouse system improvements; funds are requested to support one of the units.

All the diesel replacement and repower projects will take the affected locomotives to cleanest technology available.

D. Roles and Responsibilities

The Allegheny County Health Department (ACHD) is the applicant. ACHD is responsible for preparing the grant application and administering the grant.

The United States Steel Corporation will be a participant partner and responsible for replacing the two tugboats and constructing the Pushing Emission Control (PEC) Project for 13-15 Battery at its Clairton Coke Works.

CSXT Corporation will be a participant partner responsible for repowering the two locomotives at the Demmler Yard.

Section 2. Community Benefits, Engagement and Partnerships

A. Community Benefits

The PM2.5 concentrations in Allegheny County are among the highest in the nation and compromise the health and well-being of the Allegheny County residents. It is the desire of all stakeholders that more be done to reduce PM2.5 and its precursors in Allegheny County. Concentrations are especially high in the southeast area of the County, near the Liberty monitor. The project proposed in this application will directly affect the air quality in the area and the health of the local residents.

The construction of the Battery Pushing Emission Control project and the tugboat replacements at the U.S. Steel Clairton Coke Works, and the locomotive re-powerings downstream at the Demmler Yard in East McKeesport, will reduce emissions of fine particulate matter (PM2.5) and result in improved air quality in Allegheny County. As all these projects are in the "Mon Valley Area," they will also alleviate the source of numerous complaints from neighboring residents concerning the air quality in the Mon Valley area, an environmental justice area.

These projects will be focused on several local, community areas, rather than a large geographic area and will impact a population that is disproportionately affected in adverse ways by pollution issues.

B. Community Engagement and Partnerships

The community is very engaged in Allegheny County's efforts to improve air quality. Turnout at local hearings on planning efforts to reach attainment is considerable and citizens regularly voice their input at hearings on regulatory changes and source permits. An active environmental advocacy community exists including such organizations as Group Against Smog and Pollution, Clean Water Action, Clean Air Council, and the Breathe Project. All would likely be supportive of the projects in this proposal.

The coke oven battery baghouse improvement project requires an installation permit from the County Health Department. Community leaders, environmental advocates, and the local public are well practiced in participating in public hearings and public comment periods for permits.

Section 3. Project Sustainability

All the proposed projects in this application are for emission sources that have a long life. Emission reductions will continue for many years. The county is actively engaged in all aspects of limiting emissions and improving air quality in the affected communities and to Allegheny County at large. Three of the candidate projects involve transportation sources on water and rail, two areas where the County has no authority to regulate. These projects will enhance the overall management and control efforts by the County. The baghouse improvement project has been part of discussions with the company for some time. The County has been and will continue to evaluate appropriate controls, emission limits, and operational regulations that will result in improved air quality, specifically $PM_{2.5}$ levels, for stationary sources at the most vulnerable areas of the County. The County continues to evaluate other possible emission reduction mechanisms such as fireplace inserts and woodstove replacements.

Section 4. Environmental Results – Outcomes, Outputs and Performance Measures

A. Expected Project Outputs and Outcomes

Th the projects will significantly reduce emissions of particulate matter PM2.5, especially in environmental justice areas. The result is that these projects support the EPA Strategic Plan Goals described below:

> EPA's 2018-2022 Strategic Plan Goal 1, "A Cleaner, Healthier Environment"; Objective 1.1: "Improve Air Quality" –"work with states and tribes to accurately measure air quality and ensure that more Americans are living and working in areas that meet high air quality standards."

i. **Outputs**. Outputs include two cleaner operating tugboats, a cleaner operating locomotive, and the construction of new Pushing Emission Control equipment for Coke Battery 13-15 and Coke Battery 19-20 at the USS Clairton Coke Works, along with cleaner operating switcher locomotives at the CSXT Demmler Yard. Other expected outputs include the quarterly progress reports and a final report delivered in accordance with the grant requirements.

ii. **Outcomes**. As a result of this grant, PM2.5 emissions will be reduced in Allegheny County's Mon Valley area which is subject to highly industrialized activity and in which several environmental justice communities are located. These PM2.5 reducing emissions projects will beneficially affect the Allegheny County PM2.5 non-attainment area.

Anticipated Outputs and Outcomes

Outputs	***Outcomes***
Replace two Tier 1 tugboats with Tier 3 tugboats	Annual emission reductions = 1.4 tons PM2.5, 16 tons NOx + HC
	Lifetime emission reductions = 8.48 tons PM2.5, 96.67 tons NOx + HC
Coke Oven Battery PEC controls	Impact to air quality = greater than 0.07 ug/m3 annual
	Lifetime impact to air quality = greater than 0.07 ug/m3 annual standard
Repower switcher from Tier 0 to Battery power at USS	Annual emission reductions (tpy) PM 1.88 NOx 85.46 HC 15.21 CO 57.94
	Lifetime emission reductions (tpy) PM 11.3 NOx 512.7 HC 91.3 CO 347.6
Repower two Tier 0 switchers to Tier 2 switchers at McKeesport	Annual emission reductions = 2.4 tons PM2.5, 24 tons NOx
	Lifetime emission reductions = 24 tons PM2.5, 240 tons NOx + HC (10 yr lifetime, though useful life well in excess of that)

B. Performance Measures

1. U.S. Steel cleaner diesel, two tugboat replacements: This project is solely a purchase and replace program. Quarterly reports will be required on the progress toward purchasing the tugboats, changing out the old units, and retiring the old units. A final report will be required as to the success of the project, a final evaluation of emission reduction, and lower use of fuel, if any.

2. U.S. Steel Clairton Coke Works baghouse improvements: This project will require design work, installation permits, and complicated construction activity. Performance will be determined through the installation permits and quarterly reports on progress. The Health Department will evaluate the success through the analysis included in the installation permits, and tests performed after the units are in place.

3. U. S. Steel electric locomotive: This project will be a purchase, but require some installation. Performance will be evaluated through quarterly reports, and tests of the train when it is in place.

4. CSXT Demmler Yard two diesel switcher repowers: This project is a rebuild project. Units will need to be taken off-line to be rebuilt. Performance will be evaluated through quarterly reports of progress, and a final evaluation of the completed project.

C. Performance Plan

Projects 1, 3, and 4 will be evaluated for emission estimates based on the final products, using emission factors and fuel usage. Project 2 will have stack test data from which to evaluate emissions, and the final configuration of the baghouses, intake flow, and stack will be run in a dispersion model to evaluate the estimated air quality improvement.

D. Timeline and Milestones

Estimated and reasonable timeline for various tasks associated with the project.

Activity	Responsible Entity	Estimated Timeline
Grant preparation & submittal	ACHD, w/project partners' input.	April 10, 2020
Drafting and signing ACHD agreements with project partners.	ACHD, w/project partners' input.	May 2020 to February 2021
U.S. Steel applying for installation permits	U. S. Steel	May – June 2020
Design Engineering for PEC project	U.S. Steel	May to December 31, 2021
Design Engineering for U.S. Steel electric train project	U.S. Steel	January 2021 to December 2021
Rebuild switcher engines	CSX	March 2021 – December 2023
Procure & replace tugboats	U.S. Steel	May 2021 – December 2024
Construct Battery PEC	U.S. Steel	January 2022 – May 2023
Complete Battery PEC Project	U.S. Steel	May 2023
Complete replacement of U.S. Steel train		Feb 2024

Section 5. Programmatic Capability and Past Performance

A. Management, Completion and Reporting Requirements

Since 2005, the ACHD Air Quality Program has had significant experience with diesel powered equipment Retrofit/Repower/Replacement projects, including those funded by EPA ($3.5 Million ARRA Stimulus grant) and those it funds from its own Clean Air Fund. See table below.

Project	Equipment Retrofitted	Funding Amount & Source	Year
Penn Hills Schools	75 School Buses retrofitted w/DOCs	$185,000 ACHD Clean Air Fund	2005
Deer Lakes Schools	10 School Buses; DOCs	$10,650 ACHD Clean Air Fund	2006
City of Clairton	11 Municipal Vehicles; DOCs	$135,000 ACHD Clean Air Fund	2008
Port Authority	9 Bus repowers/2 New Hybrid buses	$1,007,500 EPA ARRA Stimulus	2009
CSXT Trans	1 Repowered switcher locomotive	$875,0000 EPA ARRA Stimulus	2009
Construct Assoc	40 Construction Vehicles	$1,231,939 EPA ARRA Stimulus	2009
Multi Serv Inc.	8 Dump Trucks retrofitted w/DPFs	$300,500 EPA ARRA Stimulus	2009
City of Pittsburgh	33 Refuse Trucks retrofitted w/DPFs	$433,000 EPA ARRA via the DEP	2009
"Build it with Clean Diesel"	Construction equip operated by small business in Allegheny County.	$920,000 ACHD Clean Air Fund made available. $375,000 spent.	2011 -2017
Neville Island Clean Diesel	26 off-road equip retrofit DPFs.	$750,000 ACHD Clean Air Fund	2014 -16

B. Management, Completion and Reporting Requirements

The ACHD successfully completes and manages a Clean Air Act Section 105 grant (Grant# A-003041-20) for Support of Air Pollution Planning and Control Programs, and a Section 103, Special Studies grant (Grant# PM-973128-05-0) for fine particulate matter PM2.5 monitoring. The Department regularly meets the reporting requirements under those agreements and documents the progress the Air Quality Program makes toward achieving the expected results, i.e., outputs and outcomes, by completing the EPA work plan documents as necessary. The projects to be funded under this grant application do not replicate activities already being funded by any of the above-mentioned grants.

The Department is currently administering an EPA grant for a pilot fireplace conversion project (XA-96343101-1). In 2015, the Department administered a $2.9 Million Targeted Air Shed Grant (EM-83493601-1) from EPA that installed a low emissions quench tower at the U.S. Steel Clairton Coke Works, greatly reducing PM2.5 emissions.

C. Staff Expertise

ACHD has experienced grant managers and other resources necessary to successfully manage this grant.

Jayme Graham, Manager of the ACHD Air Quality Program and **Sandra Etzel**, Manager of Planning for the AQP, have significant knowledge of the United States Steel Clairton Coke Works facility. Ms. Graham and Ms. Etzel have successfully handled recent Clean Air Act Section 105 grant (A-003041-14-1), and a Section 103 Special Studies grant for fine particulate matter PM2.5 monitoring.

Kim Joyce, Finance Manager of ACHD, has experience with state and federal grants, and will provide fiscal management for this project and will submit all required reports.

Thomas Lattner, Air Pollution Control Engineer, has experience with U.S. EPA grants (Current Fireplace Conversion Grant XA-96343101-1, Targeted Air Shed Grant EM-83493601-1, National Clean Diesel Funding Assistance Agreement 2A-97379401, and Woodstove Exchange Cooperative Agreement XA-83276801).

Section 6. Leveraged Funding

Regarding the tugboat and both locomotive projects, project partners U.S. Steel, CSXT, and PRCC will contribute “in-kind” services in the form of project management and all technical work during the projects.

Regarding the Coke Ovens Battery PEC project, United States Steel will contribute “in-kind” services in the form of project management and all technical work during the project. EPA funding will not be used for planning or design of the project, but will be used for implementation, more specifically for procurement, and installation involving the tasks described related to construction of the new PEC equipment, as indicated in the Detailed Budget Narrative. The overall cost of this project is between $50 and $100 Million of which all will be leverage except for the $5 Million grant amount.

Section 7. Budget

A. Expenditure of Awarded Funding

As indicated above in Section IV.D, "Timelines and Milestones," upon notification of being the recipient of an award under this RFA, the ACHD would immediately set about preparing letters of agreement between ACHD and its project participant partners covering all aspects of the projects. These legal contracts detail what the ACHD will fund, what the specifications the project participant partner must meet when procuring the equipment that is to meet the project objectives, what schedule requirements must be met to ensure that the federal funds are expended in a timely manner, what scrappage requirements must be met, if any, what reporting requirements must be met, what invoicing requirements must be met, and what federal administrative and programmatic requirements must be met. These legal contracts are approved at the highest appropriate level of all parties involved.

Once contracts/letter agreements are signed, control of the awarded federal funds is implemented by the Air Program through scrutiny of invoices to ensure expenditures are valid and appropriate, and to the ACHD Fiscal Manager, who follows all appropriate federal procedures in drawing down awarded funding. The Air Program Manager submits necessary periodic reports to the EPA detailing progress made during the reporting period to help ensure that awarded grant funds are expended in a timely and efficient manner.

B. & C. Reasonableness of Budget and Budget Detail

Detailed Budget Narrative

The proposed budget for these projects is $17,056,388 in grant funding and $45,303,910 to $95,303,910 in "Other" leveraged funding.

ACHD is requesting $17,056,388 in grant funding from EPA which will be used to fund activities undertaken by United States Steel, CSXT, and Pittsburgh Regional Clean Cities related to the replacement and/or repowering of diesel powered tugboats and switcher locomotives, and the installation by United States Steel of new Pushing Emission Control equipment at their Clairton Coke Works of which EPA funding will not be used for design or engineering related tasks.

All four projects will be in the form of participant partnerships. The only personnel costs will be for the ACHD to manage contracts, finances, and oversee that work is completed as proposed. Each of the four projects will be contracted separately, with each project allowing for reimbursement for actual costs up to the approved amount.

USS, CSXT and PRCC will also be providing "In-kind" services of project management.

PERSONNEL – ACHD	**Federal**	**Cost Share**	**"Other" Leverage**
Fiscal Officer – $50,000yr x 5% x 5yrs	$12,500		
Contract Administrator $45,000yr x 5% x 5 yr	$11,250		
Air Quality Engineer – $65,000 x 5% X 5yrs	$16,250		
TOTAL WAGES	**$40,000**		
Fiscal Officer - 43% Fringe	$5,375		
Contract Administrator - 43% Fringe	$4,838		
Air Quality Engineer - 38% Fringe	$6,175		
TOTAL FRINGE BENEFITS	**$16,388**		
PROJECT PARTNERS	**Federal**	**Cost Share**	**"Other" Leverage**
USX			
Grant preparation.	$0		In-kind
Detailed design and engineering	$0		In-kind
Order and procure diesel tugboat replacements	$4,600,000		$303,910
Coke Oven Battery PEC baghouse installation	$5,000,000		$45,000,000 to $95,000,000
Electric train repower	$3,000,000		
CSX			
Grant preparation.	$0		
Detailed design and engineering	$0		
Order and procure diesel replacements and/or repowers	$4,400,000		
TOTAL PARTNERSHIPS	**$17,000,000**	**$0**	**$45,303,910 to $95,303,910**
TOTAL FUNDING	**$17,056,388**	**$0**	**$45,303,910 to $95,303,910**
TOTAL PROJECT COST (federal and non-federal)	**$17,056,388**		
"Other" Leveraged Funds	**$45,303,910 to $95,303,910**		